PRODUCING TRUST IN FIRE AND SAFETY

SFFECO®

EXTINGUISHING & SUPPRESSION SYSTEMS

UL® LISTED

FM APPROVED

A PRODUCT OF SFFECO GLOBAL

www.sffecoglobal.com

SFFECO with its more than 30 years of experience has always been a progressive organization that has remained in the forefront of the fire fighting industry with innovative, re-engineered and unique products.

SFFECO in its state-of-the-art manufacturing plants in RIYADH & DUBAI works in close connections with renowned governmental and certification bodies to provide key answers to the challenges faced by the society.

SFFECO brings together over 3-Decades of expertise and experience in form of Design, Consultancy, Testing, Commissioning, Maintenance & Refurbishment of fire protection and fire fighting systems.

SFFECO is proud to be working with International certification bodies. For specific product certifications, please check the respective product page or contact our sales team.

UL LISTED · FM APPROVED · LPCB · NFPA MEMBER

SFFECO EXTINGUISHING & GAS SUPPRESSION SYSTEMS

The risk of fire surrounds us everywhere today. Suppression systems are the first line of defense against all kinds of fire. Fire suppression systems avoid major break outs and also help in identifying the location of the fire. Kitchen hood systems are also a part of fire suppression systems specifically designed to function against kitchen fires.

SFFECO 227 Clean Agent Fire Suppression System and SFFECO 5112 Clean Agent Fire Suppression System are safe, economical, eco-friendly, effective, odorless, and do not damage contents making them most sought after systems. Our extinguishing and suppression systems are certified as per standards set by UL, FM, USEPA and are compliant to design and quality standards of NFPA 2001. SFFECO also manufactures kitchen hood systems capable of managing all types of industrial kitchen fires.

UL LISTED

FM APPROVED

RANGE OF PRODUCT

- SFFECO-227
  clean agent fire suppression system
- SFFECO 5112
  clean agent fire suppression system
- SFFECO CO_2
  FIRE EXTINGUISHING SYSTEM
- KITCHEN HOOD EXTINGUISHING SYSTEM
- THERMOACT

SFFECO-227

clean agent fire suppression system

UL CERTIFIED
SAFETY US
EX16423

WHY SFFECO-227?

- Lower design concentration, Safe & Non-Toxic.
- Active on fire with complete extinguishment capability designed to fully discharged with in seconds.
- Three Dimensional suppression, & with effective penetration to knock down fires in hidden spaces.
- Ability to recover quickly from business disruption.
- No cost of down time.
- Zero Ozone depletion potential.
- Superior to water & dry chemicals.
- Suitable for Clalss A,B,C fires.
- SFFECO-227 is an Engineered & Pre-Engineered computer designed to protect specific Hazards.
- With SFFECO-227 Clean agent system you assured of fast, efficient, environmentally safe fire Extinguishment.
- Recognized and certified by the top independent listing & approval parties NFPA,UL,FM,U.S.EPA...

SFG-GSCAT | Date 30/12/2018 | Rev. No.: 0.0

SFFECO-227 SYSTEM

UL LISTED

FLOW CALCULATION SOFTWARE & TECHNICAL SUPPORT MATERIAL

SFFECO-227 Engineered system comes with a UL certified software, designed and developed by Hughes, US, which enables engineers to perform required flow, piping and nozzle details, SFFECO-227 Manuals are extensively prepared to provide clear understanding of system design, installation and maintenance.

ACTUATION PACKAGE UNIT

Electrical, Manual, & pneumatic unit suitable for multiple system cylinders arrangements that give more flexibility features

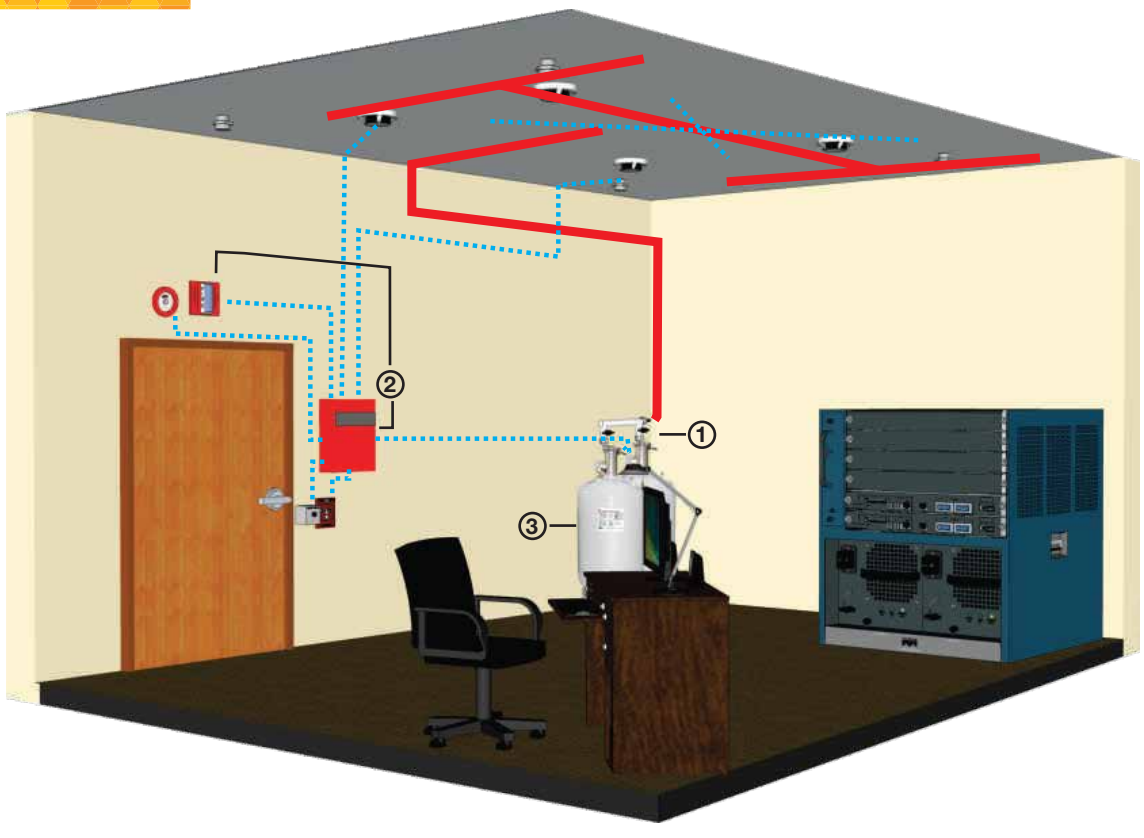
CONTROL & DETECTION HARDWARE COMPONENTS

SFFECO-227 integrated clean agent system works hand in-hand with state of the art UL/FM Approved Control Detection, & Notification.

SYSTEM CONTAINER ASSEMBLY

SFFECO-227 Engineered System cylinders assembled with head valves & straps starts from 20 lbs upto 1200 lbs equipped with head valve sizes of 1", 1.5", 2.5",3", 4" manufactured, stamped, & tested in accordance to UL and DOT requirements.

STRUCTURE



SFFECO-227 SYSTEM

UL® LISTED

FEATURES

HFC-227ea

CF3 CHFCF3-Hepta Fluoropropane is liquefied compressed colorless, odorless, electrically non-conductive gas, works to quench fires in seconds & hold damage to a max.

Suppresses fire primarily by physically cooling flame through removing heat energy, & Interrupting the combustion reaction to an extent that cannot sustain itself.

Waterless fire suppressant does not leave residues, particulates,Water or corrosion.

WORKING PRESSURE

360 PSI And 500 PSI

SAFE

SFFECO-227 System provide safe fire protection for life & assets by utilizing UL/FM Certified" HFC227 ea" Clean agent gas.

ECONOMICAL EFFECTIVE

SFFECO-227 System utilizes the Non-Ozone depleting clean agent "HFC-227ea" that protects the earth Ozone layer.

UNCOMPLICATED

SFFECO-227 Suppression system utilizes UL Listed and FM Approved CHEMORI™- 227ea" clean agent gas Sourced from Chemori USA.

ODORLESS

NFPA 2001standard rates "HFC-227ea" as an effective substitute for Halon g1301.Hence safe on global scale.

TOTAL FLOODING NO DAMAGE

In accordance with U.S.EPA,(SNAP) state that " HFC-227 ea" is an efficient, non ozone depleting Halon 1301 replacement in the use of Total Flooding System.

SELF CONTAINED

For use in occupied, & unoccupied spaces.

SFFECO-227 ENGINEERED CYLINDER FILLING DATA

360 PSI

Part No	Weight of the Agent (lbs.)	Valve Size
SF90020-E, SF 90020-E-SS	9-20	1" Valve
SF90035-E, SF 90035-E-SS	16-35	1" Valve
SF90070-E, SF 90070-E-SS	31-71	1" Valve
SF90100-F, SF 90100-F-SS	44-101	1" Valve
SF90100-E, SF 90100-E-SS	44-101	1 ½" Valve
SF90150-E, SF 90150-E-SS	66-152	1 ½" Valve
SF90250-E, SF 90250-E-SS	109-253	1 ½" Valve
SF90375-E, SF 90375-E-SS	163-379	2 ½" Valve
SF90560-E, SF 90560-E-SS	241-561	2 ½" Valve
SF90800-E	353-806	4" Valve
SF91000-E	439-1008	4" Valve
SF91200-E	519-1200	4" Valve

500 PSI

Part No	Weight of the Agent (lbs.)	Valve Size
SF90020-EH, SF 90020-EH-SS	9-19	1" Valve
SF90035-EH, SF 90035-EH-SS	16-33	1" Valve
SF90070-EH, SF 90070-EH-SS	31-67	1" Valve
SF 90100-FH, SF 90100-FH-SS	44-94	1" Valve
SF90100-EH, SF90100-EH-SS	44-94	1 ½" Valve
SF90150-EH, SF 90150-EH-SS	66-143	1 ½" Valve
SF90250-EH, SF 90250-EH-SS	109-237	1 ½" Valve
SF90375-EH, SF 90375-EH-SS	163-356	2 ½" Valve
SF90560-EH, SF 90560-EH-SS	241-527	2 ½" Valve
SF 90650-EH, SF 90650-EH-SS	285-624	2 ½" Valve
SF 90650-FH	285-624	3" Valve
SF 90800-FH	360-788	3" Valve
SF 90800-EH	360-788	4" Valve
SF 91000-FH	445-974	3" Valve
SF 91000-EH	445-974	4" Valve
SF91200-EH	519-1137	4" Valve

SFFECO-227 PRE-ENGINEERED CYLINDER FILLING DATA

Part No	Weight of the Agent (lbs.)	Valve Size
SF-3-XXX+	1-3	½" Valve
SF-6-XXX+	3-6	½" Valve
SF-12-XXX+	6-12	½" Valve
SF-18-XXX+	12-18	½" Valve
SF-35-XXX+	16-35	1" Valve
SF-70-XXX+	31-70	1" Valve
SF-140-XXX+	66-140	1 ½" Valve
SF-240-XXX+	109-240	1 ½" Valve
SF-360-XXX+	163-360	2 ½" Valve
SF-520-XXX+	241-520	2 ½" Valve

DIRECTIONAL VALVE

SIZES OF SELECTOR VALVES		
SF 603300-P	2 ''	Threaded Selector Valve c/w Pneumatic Actuator
SF 603301-P	2-1/2 ''	Threaded Selector Valve c/w Pneumatic Actuator
SF 603302-P	3"	Threaded Selector Valve c/w Pneumatic Actuator
SF 603303-P	4"	Threaded Selector Valve c/w Pneumatic Actuator
SF 603304-P	6"	Flanged Selector Valve c/w Pneumatic Actuator

APPLICATIONS

AIRPORTS

OIL REFINIREIS

SERVER ROOM

LABS

TRAINS

SFFECO 5112

UL CERTIFIED SAFETY US EX16423

WHY SFFECO-5112 ?

SFFECO-**5112** system cylinder valve assemblies are Equipped with pressure differential high flow rate valves in in order to meet the rapid discharge time of 10 seconds as specified in NFPA 2001.

SFFECO-**5112** has a wide filling range from 20lbs to 1200lbs allowing for head valve outlets ranging from 1" to 4".

SFFECO-**5112** cylinder head valves have been designed to be actuated electrically, pneumatically or mechanically, to make it suitable for different designs application.

WHY CHEMORI 5112 ?

Chemori-5112 is a colorless, electrically non -conductive fluid chemical known as fluroketone, FK-5-1-12.

Chemori-5112 is long-term sustainable technology with zero ozone depletion, extremely low global warming potential, and short atmospheric lifetime.

Chemori-5112 offers a unique combination of safety, low environmental impact and extinguishing performance.

SFFECO-5112 SYSTEM

UL LISTED

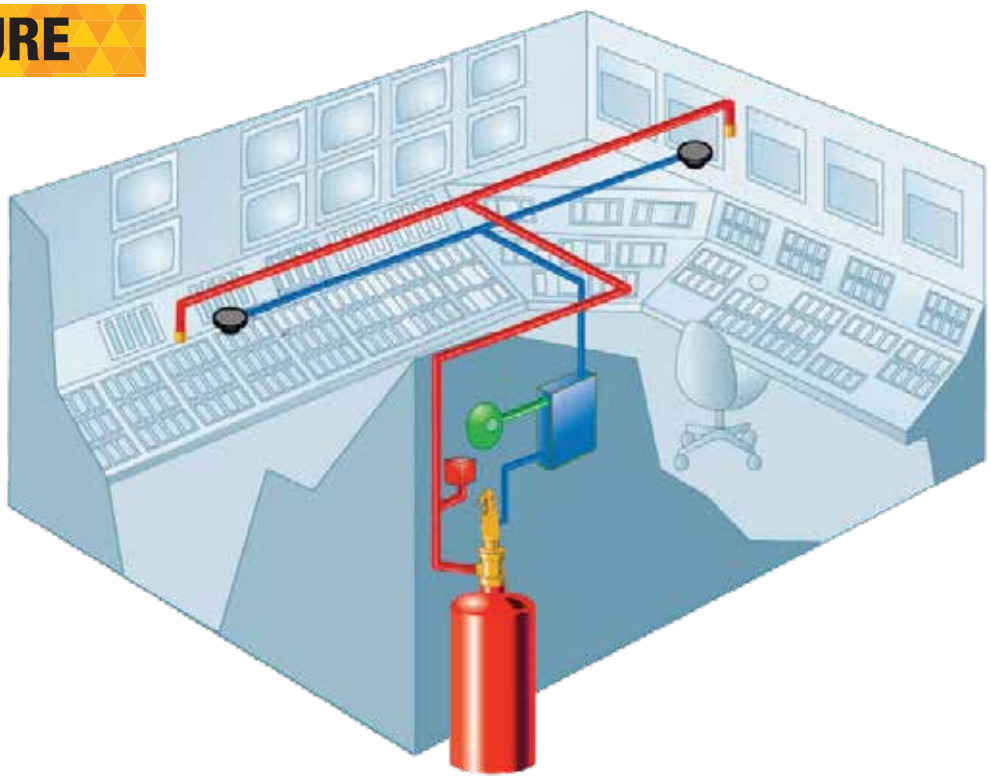
FLOW CALCULATION SOFTWARE & TECHNICAL SUPPORT MATERIAL
The SFFECO-5112 software, calculates the flow calculation and design criteria as described in the manual.

ACTUATION PACKAGE UNIT
Electrical, Manual, & pneumatic unit suitable for multiple system cylinders arrangements that give more flexibility features

CONTROL & DETECTION HARDWARE COMPONENTS
SFFECO-5112 integrated clean agent system works hand in-hand with state of the art UL/FM Approved Control Detection, & Notification.

SYSTEM CONTAINER ASSEMBLY The SFFECO-5112 Engineered System cylinders assembled with headvalves & straps starts from 20 lbs upto 1200 lbs equipped with head valve sizes of 1", 1.5", 2.5",4" manufactured, stamped, & tested in accordance to UL and DOT requirements.

STRUCTURE



SFFECO-5112 SYSTEM

UL LISTED

FEATURES

The agent storage cylinder is designed to hold the clean agent at a normal operating pressure of 500 psi (34.5 bar) (35.2kg/cm2) at 70 °F (21.1°C).

The agent storage cylinders are suitable use at temperatures of 32°F (0° C) to 122°F (50° C).

- NO RESIDUE
- COST-EFFECTIVE
- NON-TOXIC
- RAPID ACTING
- ECO-FRIENDLY
- SHORT ATMOSPHERIC LIFE
- ZERO OZONE DEPLETION
- GLOBAL WARMING SAFE

Part Number	Cylinder Size	Weight of the Agent (LBS)	Valve Size
SF 70020-E	20 LB	11-21 LB	1" Valve
SF 70035-E	35 LB	18-38 LB	1" Valve
SF 70070-E	70 LB	36-76 LB	1" Valve
SF 70100-F	100 LB	51-108 LB	1" Valve
SF 70100-E	100 LB	51-108 LB	1 1/2" Valve
SF 70150-E	150 LB	77-163 LB	1 1/2" Valve
SF 70250-E	250 LB	127-271 LB	1 1/2" Valve
SF 70375-E	375 LB	190-406 LB	2 1/2" Valve
SF 70560-E	560 LB	281-601 LB	2 1/2" Valve
SF 70650-E	650 LB	333-712 LB	2 1/2" Valve
SF 70650-F	650 LB	333-712 LB	3" Valve
SF 70800-E	800 lb	420-900 LB	4" Valve
SF 70800-F	800 lb	420-900 LB	3" Valve
SF 71000-E	1000 lb	520-1112 LB	4" Valve
SF 71000-F	1000 lb	520-1112 LB	3" Valve
SF 71200-E	1200 lb	606-1297 LB	4" Valve

DIRECTIONAL VALVE

SIZES OF SELECTOR VALVES		
SF 603300-P	2 ''	Threaded Selector Valve c/w Pneumatic Actuator
SF 603301-P	2-1/2 ''	Threaded Selector Valve c/w Pneumatic Actuator
SF 603302-P	3"	Threaded Selector Valve c/w Pneumatic Actuator
SF 603303-P	4"	Threaded Selector Valve c/w Pneumatic Actuator
SF 603304-P	6"	Flanged Selector Valve c/w Pneumatic Actuator

APPLICATIONS

AIRPORTS

OIL REFINIREIS

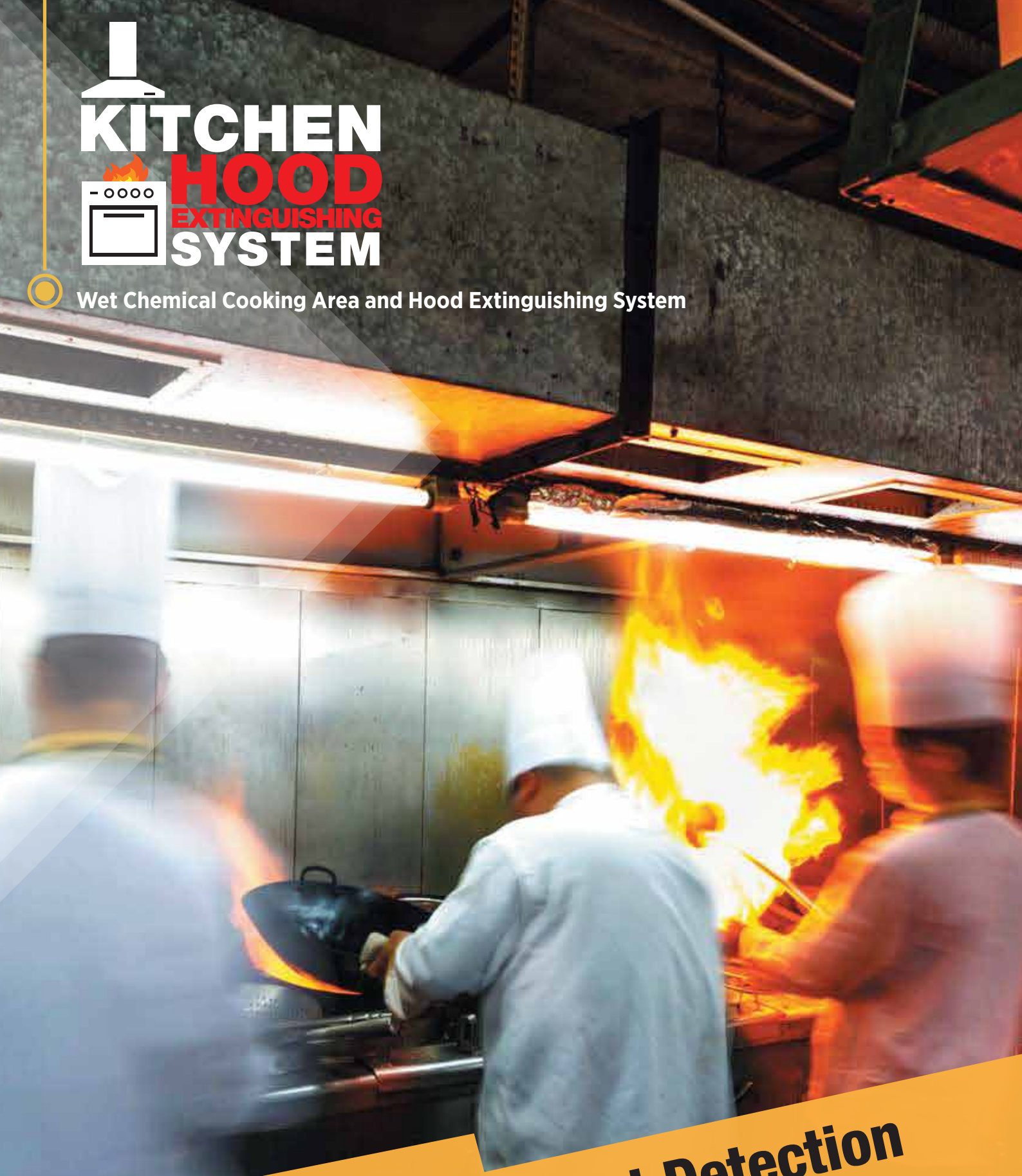
SERVER ROOM

LABS

TRAINS

KITCHEN HOOD EXTINGUISHING SYSTEM

Wet Chemical Cooking Area and Hood Extinguishing System



Fast Detection

Extended Coverage

Competitive

SFG-GSCAT | Date 30/12/2018 | Rev. No.: 0.0

COOKING AREA & HOOD EXTINGUISHING SYSTEM

SFFECO Cooking area and hood extinguishing system has been developed to meet the safety requirements in kitchen and other cooking areas. The risk of fire is very high in cooking areas due to the presence of direct flame and highly combustible materials like oil, grease and flammable fumes which emits during the use of such materials.

SFFECO Cooking area and hood extinguishing system is easy to install. We understand that cooking areas are meant to be clean and dirt free and hence we ensured that our extinguishing system is easy to clean and used materials which require low maintenance. It fits various setups and all sizes of cook top areas in Hotels, Restaurants, Commercial Kitchens and domestic kitchens.

Wet-chemical is used as a suppression agent in SFFECO's cooking area and hood extinguishing system as it is specifically developed to fight such fires. The wet-chemical agent covers the fire and forms a layer on top of the burning material which can either be liquid or other materials. Due to the layer of the suppression agent the heat and oxygen is cut off from the flame resulting in extinguishing, the layer also ensures that flammable fumes from the residue does not escape which might cause the fire to reignite.

How does it work?

The system consists of a heat sensitive fusible link detector which automatically activates the system in case of a fire. If required it can also be activated manually by pulling the handle or ring which will be clearly marked for easy view. The system also cuts off fuel supply like gas or electricity when activated to ensure complete safety.

We always recommend to keep a class K and F portable fire extinguisher in range in case it is required.

Features

Cost Effective
Low Maintenance
Easy to Clean
Automatic and Manual Activation
Available to fit all kitchen sizes
Easy to Clean
Effective against all kitchen hood fires

APPLICATIONS

HOODS & FILTERS

OIL FRYERS

COOKING RANGES

CHAR-BROILERS

WOKS

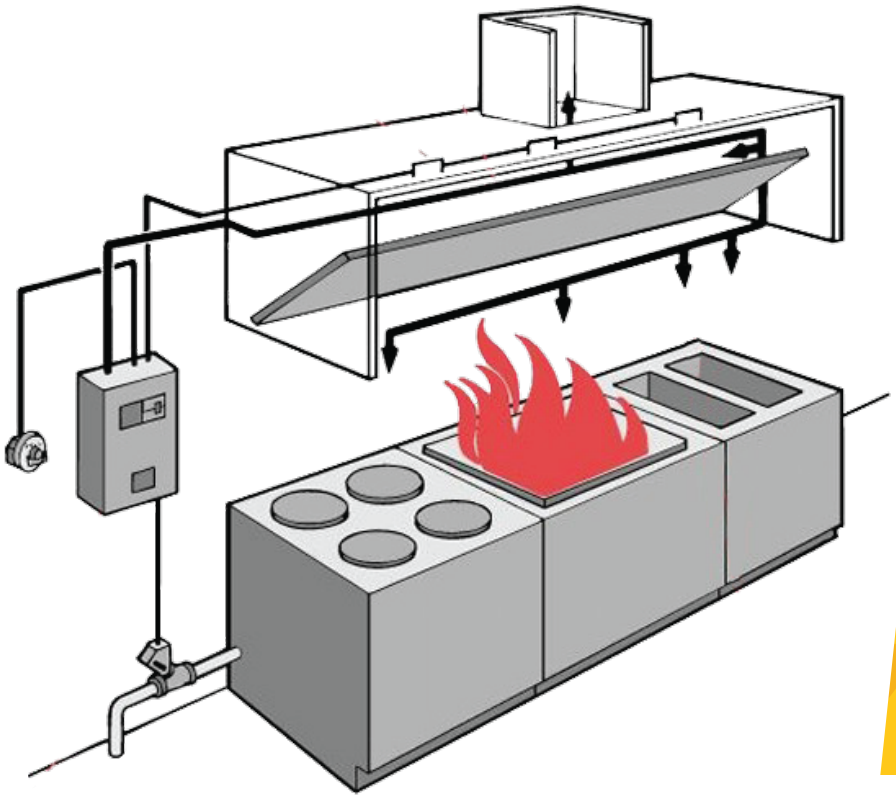
GRIDDLES

TILT SKILLETS

SFG-GSCAT | Date 30/12/2018 | Rev. No.: 0.0

COOKING AREA & HOOD EXTINGUISHING SYSTEM

FEATURES & INSTALLATION



Specification

1) 3 Different Sizes of Cylinder Capacity to match with any hood sizes as mentioned below

(SFD L9.5 WC KHS)
(SFD L15 WC KHS)
(SFD L22.7 WC KHS)

2) Different temperature for fusible link suit with any fire temperature.

3) Different type of nozzle for different appliances.

LOW INSTALLATION COST

The nozzles provides wider protection area and lowest flow points against to other brands.
The plenum nozzles D-A protection area is 3 m x 1,2 m but it is 2,4 m x 0,5 m in the other systems.
The duct and hood nozzles D-A flow point is 1 m but it is 2 m in the other systems.
The cooking appliance nozzle D-A flow point is 1 m but it is 2 m in the other systems.

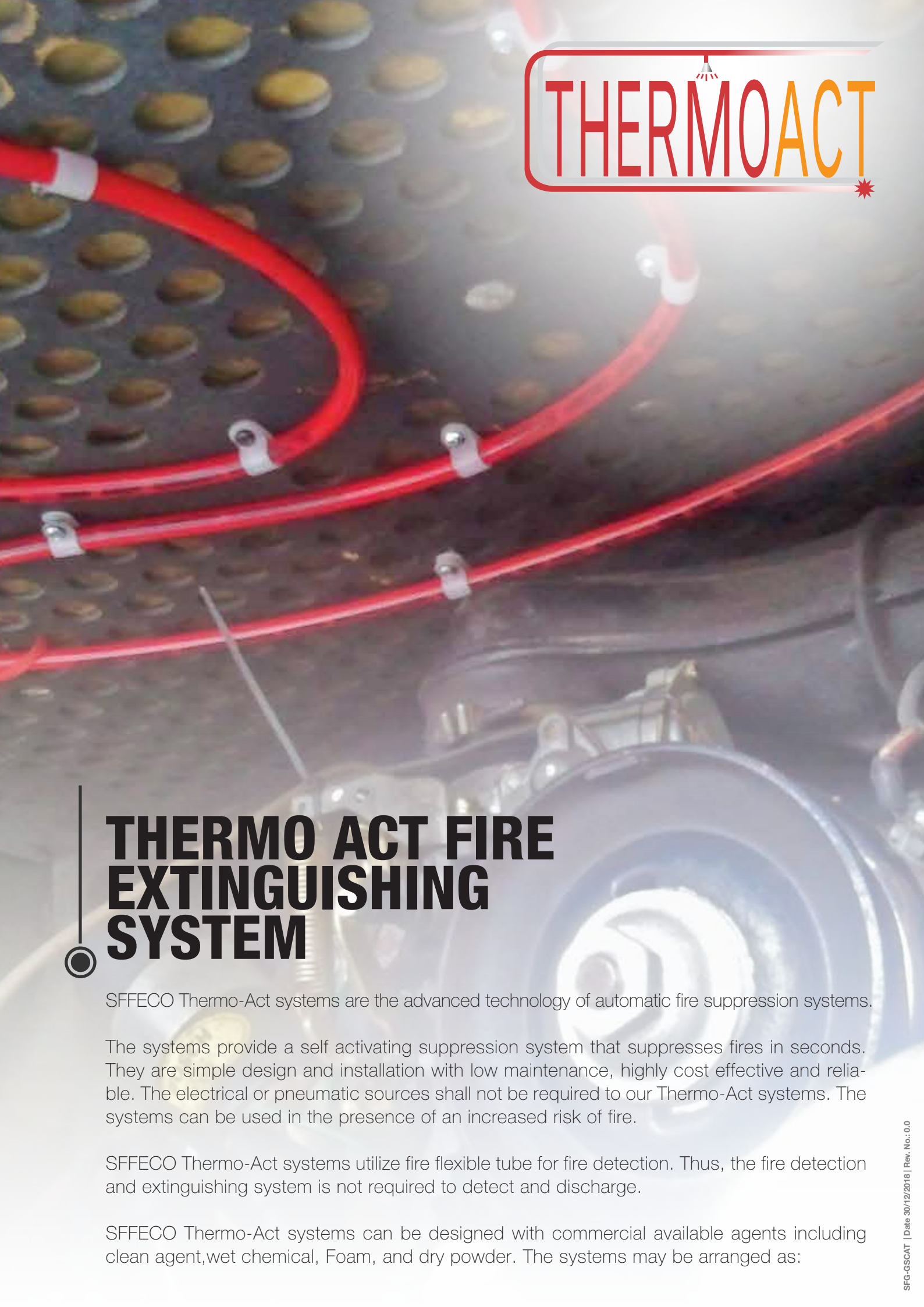
As a result:
Sffeco wet Chemical system offers low labor and piping cost due to wider nozzle protection area with competitive solution and small sized cylinders after low flow points.

LOW MAINTANENCE COST

1. The maintenance is easy.
Sffeco wet Chemical system can be checked easily by a gauge (green zone).
The other system can be check by a special equipment like sensitive scales.

2. The filling cost is low.
Sffeco wet Chemical system can be pressurized with nitrogen without any cylinder after each discharge.
Where the other systems need an additional pressurized nitrogen cylinder after each discharge.

SFG-GSCAT | Date 30/12/2018 | Rev. No.: 0.0



THERMO ACT FIRE EXTINGUISHING SYSTEM

SFFECO Thermo-Act systems are the advanced technology of automatic fire suppression systems.

The systems provide a self activating suppression system that suppresses fires in seconds. They are simple design and installation with low maintenance, highly cost effective and reliable. The electrical or pneumatic sources shall not be required to our Thermo-Act systems. The systems can be used in the presence of an increased risk of fire.

SFFECO Thermo-Act systems utilize fire flexible tube for fire detection. Thus, the fire detection and extinguishing system is not required to detect and discharge.

SFFECO Thermo-Act systems can be designed with commercial available agents including clean agent,wet chemical, Foam, and dry powder. The systems may be arranged as:

SFG-GSCAT | Date 30/12/2018 | Rev. No.: 0.0

SFFECO THERMO-ACT SYSTEM

Indirect System

SFFECO Thermo-Act indirect system for low pressure agent as shown below uses the tube as a fire detection device only. The fire suppression agent is delivered through a special copper or stainless steel tubing system. Once the tube ruptures due to heat exposure, the drop inpressure activates the indirect valve to direct the flow of suppression agent to diffuser nozzles via a fixed tubing system. This system is usually used in large area.

Direct System

SFFECO Thermo-Act direct system for low pressure agent as shown below uses the flexible tube as both the detection device and extinguishing discharge system. In case of fire, the section of tube most exposed to heat will rupture forming a discharge nozzle. The suppressant agent is then completely released due to pressure drop in the tube.

Agent & Type of System	Models	Max. Fill (Lbs.)	Agent Weight (KG)
Clean Agent Direct System	SF-THD-3	3	1
	SF-THD-6	6	2
	SF-THD-12	12	5
	SF-THD-18	18	8
Clean Agent Indirect System	SF-THS-3	3	1
	SF-THS-6	6	2
	SF-THS-12	12	5
	SF-THS-18	18	8

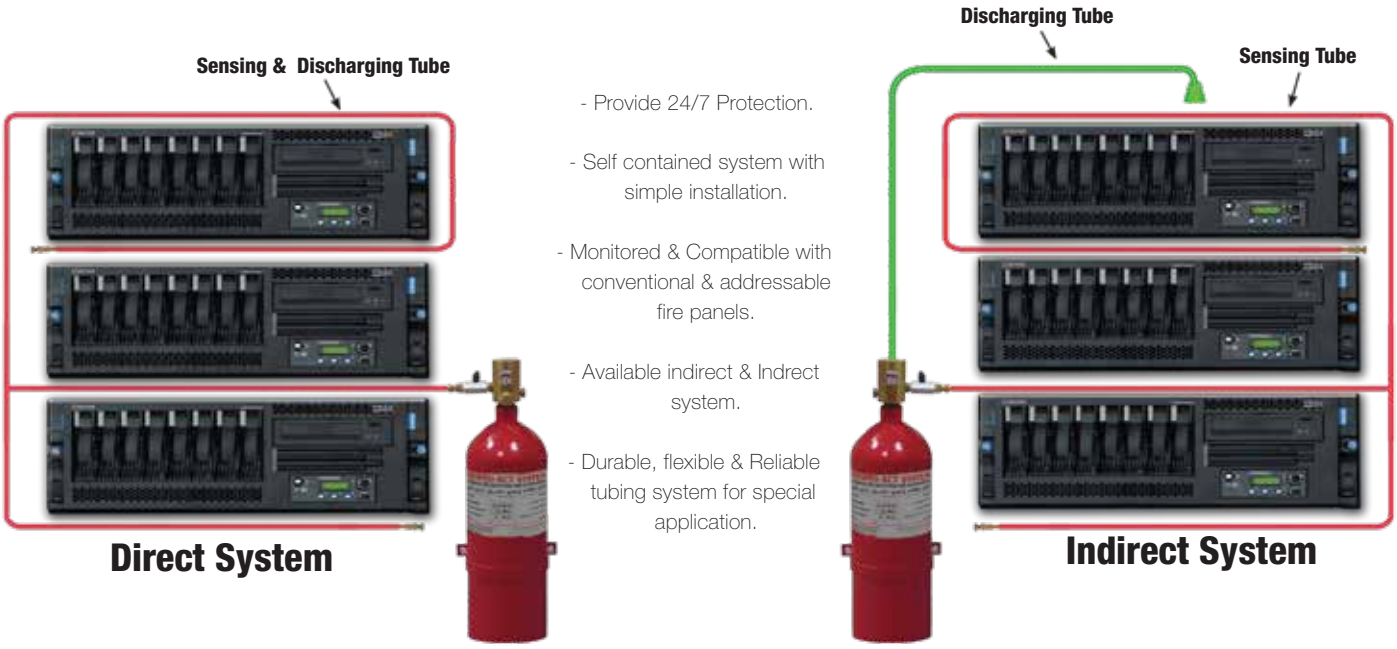
*** Other filling agents are available upon customer request.**

SFG-GSCAT | Date 30/12/2018 | Rev. No.: 0.0

PROBLEMS & SOLUTIONS

The Problem

Electrical enclosures can be found in virtually any industrial or commercial space. In some cases the enclosure might be a single small panel while in others it may involve a large room filled with electrical boxes. Should a fire occur in one of these cabinets, it would typically destroy the contents, but unchecked fire could take the room or even the building, costing money and downtime.
Regardless of the number of enclosures, Thermo-Act offers a reliable, cost-effective method to increase the fire protection of these areas by detecting and suppressing the fire in the cabinet itself.



The Solution

Because Thermo-Act takes the fire detection and suppression inside of the hazard, a growing fire can be caught quickly, preventing the spread of fire to other parts of the building that would require firefighters or water sprinklers to extinguish.
By containing the fire to the individual enclosure damage is limited to that enclosure and the collateral damage often caused by traditional fire suppression is avoided.

APPLICATIONS

SERVER ROOMS

ELECTRICAL PANEL

AVIATION AIRPORT

ROAD TRANSPORTS

MARINE TRANSPORT

RAIL TRANSPORT

SFG-GSCAT | Date 30/12/2018 | Rev. No.: 0.0

SFFECO

FIRE EXTINGUISHING SYSTEM

CO_2

SFG-GSCAT | Date 30/12/2018 | Rev. No.: 0.0

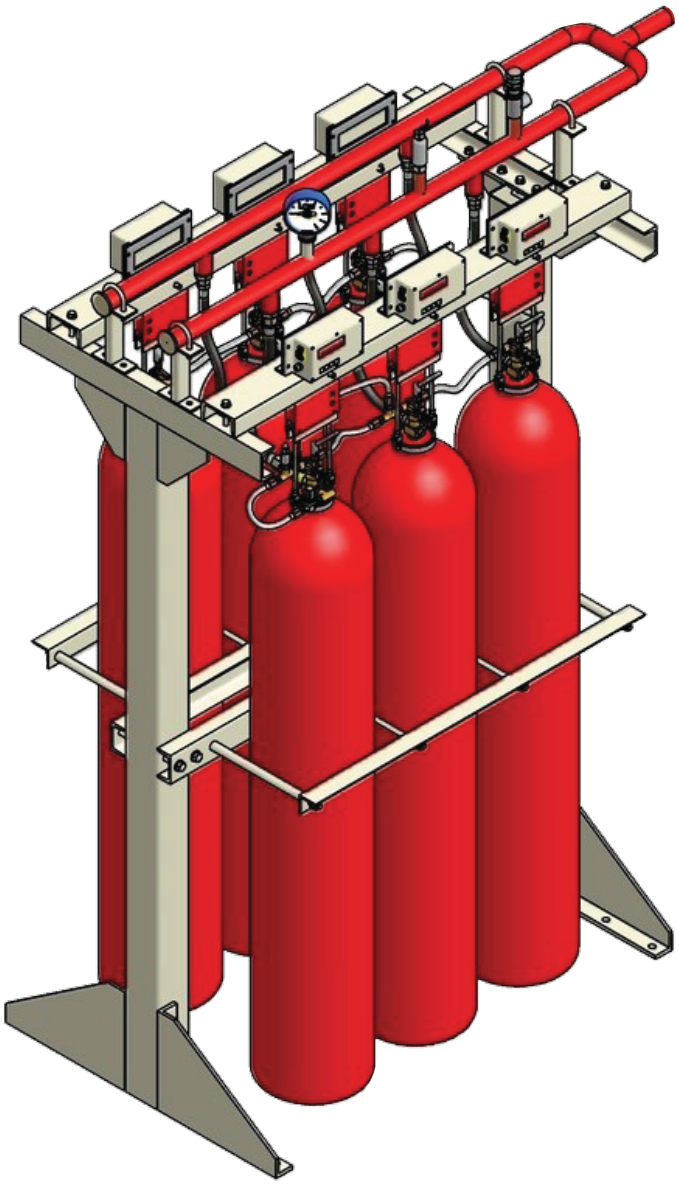
CARBON DIOXIDE FIRE EXTINGUISHING SYSTEM

LISTED

Carbon Dioxide is an colorless, electrically non-conductive, non-corrosive, and non-deteriorating inert suppression agent. Carbon Dioxide is approximately 50% heavier than air, and is normally present in the atmosphere at about 0.03% by volume. Carbon Dioxide is instrumental in controlling respiration and other vital responses in animals and humans, but it WILL NOT support life.

Carbon Dioxide is a standard commercial product commonly used for carbonating beverages, fast freezing food products, purging pipes and tanks, medical purposes, and a multitude of additional tasks. It is also used for fire fighting purposes: i.e. hose reels, portable hand extinguishers, and engineered fixed pipe systems. Carbon Dioxide is available in most large cities and seaports throughout the world.

Carbon Dioxide extinguishes fire by reducing the oxygen content of the protected space and/or local flame front to a point where it will not support combustion. Oxygen reduction below 16% by volume will extinguish most fires. Surface or "flash" type fires (oils, paints, etc.) are quickly extinguished. Deep seated or "smoldering" type fires (paper, baled cotton, clothing, etc.) are extinguished by the prolonged action of a high concentration of Carbon Dioxide. Retaining the agent within the protected space reduces the fire's ability to re-ignite. In addition, Carbon Dioxide has a cooling effect on the surrounding atmosphere that has been found to be a benefit to fire extinguishment.



FEATURES :

- UL Listed High Pressure Carbon Dioxide System
- In accordance to ANSI/NFPA 12
- Strong Alloy Steel Cylinders
- Protection for large variety of hazards
- Electronically operated master valves
- Pressure actuated slave valves
- Available for Total Flooding or Local Fire Protection
- Lower Overall Maintenance Costs
- Continuous Monitoring of Pressure & Weight Loss
- Non-Corrosive & Non-conductive and leaves No Residue
- Suitable for Class A, B and C hazards

* Standard system is available upon customer request.

TECHNICAL DATA

CO_2 EXTINGUISHING SYSTEM

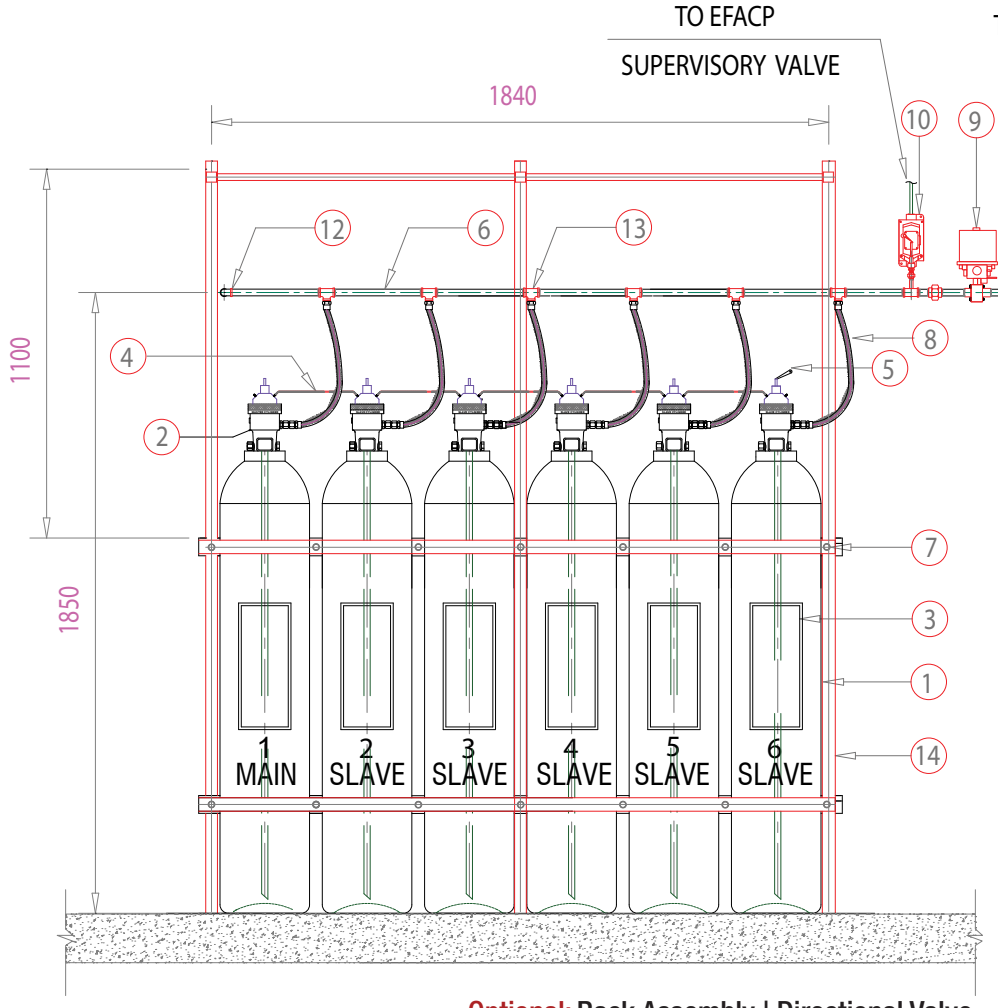
Operating Pressure:
58 Bar (850 psi) at 21°C (70°F)

Operating Temperature:
-18°C to 54.4°C (0°F to 130°F)

Capacity & Range of Cylinder CO2 are available in									
*4.4 lbs	*10 lbs	*13 lbs	*20 lbs	*50 lbs	100 lbs	*117 lbs	*147 lbs	*176 lbs	220 lbs

* Available upon customer request

TYPICAL ARRANGEMENT



1.	100 LBS HIGH PRESSURE CO2 CYLINDER
2.	ELECTRICAL SOLENOID ACTUATOR
3.	IDENTIFICATION LABEL
4.	FLEX LOOP Ø3 MM CONNECTION
5.	MANUAL LEVER ACTUATOR
6.	MANIFOLD (20mmØ)
7.	CYLINDER STRAP
8.	DISCHARGE FLEX CONNECTION Ø15 MM
9.	STOP MAINTENANCE VALVE (OPTIONAL)
10.	DISCHARGE PRESSURE SWITCH (OPTIONAL)
11.	DISCHARGE PIPE (20mmØ)
12.	ELBOW 20mmØ
13.	TEE 20mmØ
14.	CYLINDER RACK

Optional: Rack Assembly | Directional Valve

SFG-GSCAT | Date 30/12/2018 | Rev. No.: 0.0

Follow us on Social Media

SFFECO GLOBAL

P.O.Box 261318
Jebel Ali Freezone
Dubai, U.A.E

T: +971 4 880 9890
F: +971 4 880 9822
E: sales@sffecoglobal.com
W: www.sffecoglobal.com

TOLL FREE 800 SFFECO 733326